

CLAIMS

What is claimed is:

1. A method, comprising:
positioning a substrate having an outer dimension near an embossing foil;
and
checking the substrate for drift relative to the embossing foil.
2. The method of claim 1, wherein positioning further comprises centering the substrate relative to the embossing foil.
3. The method of claim 2, wherein positioning further comprises engaging the outer dimension with a plurality of rods coupled to actuators.
4. The method of claim 3, wherein checking further comprises repositioning the substrate.
5. The method of claim 4, wherein repositioning further comprises controlling the actuators with an actuator control algorithm.
6. The method of claim 1, wherein positioning further comprises maintaining an embossable film disposed above the substrate at a pre-heated temperature.
7. The method of claim 1, further comprising pressing the embossing foil into the embossable film.
8. The method of claim 1, further comprising separating the embossable film from the embossing foil.
9. The method of claim 8, further comprising cooling the embossable film.

10. An apparatus, comprising:
 - means for positioning a substrate near an embossing foil; and
 - means for checking a drift of the substrate relative to the embossing foil.
11. The apparatus of claim 10, wherein means for positioning further comprises means for centering the substrate relative to the embossing foil.
12. The apparatus of claim 10, wherein means for checking further comprises means for repositioning the substrate relative to the embossing foil.
13. The apparatus of claim 10, wherein means for positioning further comprises means for maintaining a pre-heated temperature of an embossable film disposed above the substrate.
14. An apparatus, comprising:
 - an embossing foil;
 - a nest disposed below the embossing foil, the nest having an gas-bearing surface to receive a substrate having an outer dimension; and
 - a plurality of piezo actuators disposed near the gas-bearing nest, the plurality of piezo actuators to engage the outer dimension to center the substrate relative to the embossing foil.
15. The apparatus of claim 14, further comprising a controller coupled to the plurality of piezo actuators to sense a motion stoppage of the substrate.
16. The apparatus of claim 14, wherein the plurality of piezo actuators comprise a push rod to engage the outer dimension of the substrate.

17. The apparatus of claim 14, wherein the plurality of piezo actuators comprise nano actuators.
18. The apparatus of claim 14, further comprising an actuator control algorithm to control the plurality of piezo actuators while engaged with the outer dimension.
19. The apparatus of claim 14, wherein the nest is defined by a wall, and wherein the gas-bearing surface prevents the substrate from making mechanical contact with the nest.
20. The apparatus of claim 14, wherein the substrate comprises a disk having an outer diameter to engage the plurality of piezo actuators.